



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,884	02/27/2002	Manoharprasad K. Rao	201-0939 FAM	7808
28549	7590	11/24/2003	EXAMINER	
KEVIN G. MIERZWA ARTZ & ARTZ, P.C. 28333 TELEGRAPH ROAD, SUITE 250 SOUTHFIELD, MI 48034			GIBSON, ERIC M	
		ART UNIT		PAPER NUMBER
				3661

DATE MAILED: 11/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Offic Action Summary	Applicati n N . 09/683,884	Applicant(s) RAO ET AL.
Examin er	Art Unit	
Eric M Gibson	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 25 August 2003.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-21 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 27 February 2002 is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____ .
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . 6) Other: _____ .

DETAILED ACTION

Claim Objections

1. Claim 18 is objected to because of the following informalities:

After claim 18 and before claim 19, there is an "a" listed on the left-hand side of the paper. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7 and 9-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Breed (US006209909B1).

a. As per claim 1, Breed teaches a system for sensing that an airbag should be deployed prior to the start of the impact including an object sensor generating an object signal (column 8, lines 52-55), object distance, position and relative velocity signals (column 10, lines 65-67), an object classifier (neural computer 145, figure 1A) generating an object classification signal corresponding to a type of second vehicle (column 8, lines 58-64), and a controller activating the countermeasure in response to the sensed signals (column 9, lines 3-8).

- b. As per claim 2, Breed teaches that the invention is possible to be implemented using a vision system (column 10, lines 8-17).
- c. As per claim 3, Breed teaches that the pattern recognition uses such information as form or shape, size or weight and breadth among others (column 8, lines 49-52).
- d. As per claim 4, Breed teaches a radar system as the preferred implementation (column 8, lines 9-14).
- e. As per claims 5-7, Breed teaches that the pattern recognition uses such information as form or shape, size or weight and breadth among others (column 8, lines 49-52).
- f. As per claim 9, Breed teaches a system for sensing that an airbag should be deployed prior to the start of the impact including an object sensor generating an object signal (column 8, lines 52-55), object distance, position and relative velocity signals (column 10, lines 65-67), an object classifier (neural computer 145, figure 1A) generating an object classification signal corresponding to a type of second vehicle (column 8, lines 58-64), and a controller activating a first or second countermeasure (column 4, lines 48-56) in response to the sensed signals (column 9, lines 3-8).
- g. As per claim 12, Breed teaches determining an object class (column 11, lines 26-32).
- h. As per claim 13, Breed teaches a method for sensing that an airbag should be deployed prior to the start of the impact including establishing a detection zone (see figures 1 and 2), an object sensor determining an object signal (column 8,

lines 52-55), object distance, position and relative velocity signals (column 10, lines 65-67), an object classifier (neural computer 145, figure 1A) determining an object classification signal corresponding to a type of second vehicle (column 8, lines 58-64), and a controller activating the countermeasure in response to the sensed signals (column 9, lines 3-8).

- i. As per claims 14-17, Breed teaches that the pattern recognition uses such information as form or shape, size or weight and breadth among others (column 8, lines 49-52).
- j. As per claim 18, Breed teaches using a radar and vision system together to perform the method of the invention (column 10, lines 8-17).
- k. As per claim 19, Breed teaches activating first or second or both countermeasures in response to the severity of the accident (column 11, lines 58-67), determined by taking into account the object classification signal.
- l. As per claim 20, Breed teaches that the second vehicle orientation is taken into account in the system (column 10, lines 66-67).
- m. As per claim 21, Breed teaches determining an object class (column 11, lines 26-32) and a second vehicle orientation is taken into account in the system (column 10, lines 66-67).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breed in view of Foo et al. (US006036225A).

a. As per claim 8, Breed teaches the invention as explained in the rejection of claim 1. Breed teaches that the relative vehicle velocity is taken into account in the system, but does not teach actuating either a first or second countermeasure in dependence on the vehicle speed. Foo teaches a conventional restraint system wherein the actuation of a first or second countermeasure is determined based on the velocity exceeding a first and second threshold value (column 2, lines 40-51), in order to provide protection to the occupant in proportion to the severity of the crash. It would have been obvious to one of ordinary skill in the art, at the time of invention, to include vehicle velocity dependent actuation of a first or second countermeasure in the system of Breed, in order to take into account the severity of the crash, as taught by Foo.

Response to Arguments

4. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kosiak (US005835007A) teaches a method and apparatus for crash sensing using anticipatory sensor inputs. Eibert et al. (US005621807A) teaches an intelligent range image camera for object measurement. Ansaldi et al.

(US005343206A) teaches a method and means for avoiding collision between a motor vehicle and obstacles. Blackburn et al. (US005185701A) teaches a method for determining frequency components in a vehicle crash.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric M Gibson whose telephone number is (703) 306-4545. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on (703) 308-3873. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

EMG



WILLIAM A. CUCHLINSKI, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600